This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) ~~A cable modem termination system (CMTS), the CMTS~~ A gateway comprising:

a processor; and

a memory having stored therein computer executable instructions, that when executed by the processor, cause the gateway to perform a method of:

~~a gateway configured to output~~ transmitting signals on at least two types of data tunnels for transfer over a network to Customer Premises Equipment (CPE), each data tunnel characterized as a one-way data stream of out-of-band (OOB) messaging signals, where each type of data tunnel is associated with a different type of OOB messaging signal such that different types of data tunnels transfer different types of OOB messages; and

~~wherein the CMTS outputs~~transmitting a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers.

2. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein the method further performs: ~~gateway is configured to output~~ transmitting the OOB messaging signals on at least four types of data tunnels.

3. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein at least one of the types of data tunnels is a broadcast tunnel.

4. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein at least one of the types of data tunnel is a conditional access tunnel.

5. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein at least one of the types of data tunnels is an application tunnel.

6. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein at least one of the types of data tunnels is a code download tunnel.

7. (Currently Amended) The ~~CMTS~~ gateway of claim 1 ~~further comprising~~wherein the method further performs: ~~a plurality of output ports in communication with the gateway for outputting~~ transmitting the data streams of the data tunnels onto the network on a plurality of output ports in communication with the gateway, wherein each output port includes at least two types of data tunnels.

8. (Currently Amended) The ~~CMTS~~ gateway of claim 7 wherein a first and a second one of the plurality of output ports are associated with different types of OOB messaging signals.

9. (Currently Amended) The ~~CMTS~~ gateway of claim 8 further comprising a plurality of blades, each blade including one or more output ports.

10. (Currently Amended) The ~~CMTS~~ gateway of claim 9 wherein the first and second output ports are located on the same blade.

11. (Currently Amended) The ~~CMTS~~ gateway of claim 9 wherein the first and second output ports are located on different blades.

12. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein each data tunnel is identified with a network address.

13. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein the ~~gateway transfers the~~ OOB messaging signals are transmitted according to protocols defined in a Data Over Cable Service Interface Specification (DOCSIS).

14. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein the CPE is a settop box.

15. (Currently Amended) The ~~CMTS~~ gateway of claim 1 wherein the CPE includes an embedded cable modem (eCM) and an embedded settop box (eSTB).

16. (Currently Amended) The ~~CMTS~~ gateway of claim 15 wherein the OOB messaging signals are transferred to the eCM.

17. (Cancelled)

18. (Previously Presented) A cable modem termination system (CMTS), the CMTS comprising:

a gateway configured to output signals on a plurality of data tunnels for transfer over a network to Customer Premises Equipment (CPE), each data tunnel characterized as a one-way data stream of out-of-band (OOB) messaging signals; and

a plurality of output ports for transferring the OOB messaging signals from the gateway to the network, wherein each output port is capable of transferring different OOB messaging signals,

wherein the CMTS outputs a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers.

19. (Original) The CMTS of claim 18 wherein each output port includes at least two types of data tunnels.

20. (Original) The CMTS of claim 18 wherein a first and a second one of the plurality of output ports are associated with different OOB messaging signals.

21. (Original) The CMTS of claim 20 further comprising a plurality of blades, each blade including one or more output ports.

22. (Original) The CMTS of claim 21 wherein the first and second output ports are located on the same blade.

23. (Original) The CMTS of claim 21 wherein the first and second output ports are located on different blades.

24-38. (Canceled)

39. (Previously Presented) A method comprising:

receiving data services information from a data network;

receiving out-of-band signals and application data from a management network;

processing the data services information, out-of-band signals, and application data for transmission; and

transmitting the data services information, out-of-band signals, and application data to Customer Premises Equipment (CPE) on two-way output channels and a plurality of different types of one-way output data tunnels, each different type of out-of-band signal sent on a different type of data tunnel; and

outputting a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses wherein two different tunnels of the same tunnel type have different tunnel type identifiers.

40. (Previously Presented) The method of claim 39, wherein processing the data services information, out-of-band signals, and application data comprises converting them from IP packets into digital cable packets.

41. (Previously Presented) The method of claim 39, further comprising receiving digital cable packets from a subscriber station.

42. (Previously Presented) The method of claim 41, further comprising converting the digital cable packets to IP packets.

43. (Previously Presented) The method of 42, further comprising transmitting the IP packets to an internet service provider.

44. (Previously Presented) The method of claim 39, wherein the tunnel type is a common broadcast tunnel.

45. (Previously Presented) The method of claim 39, wherein the tunnel type is a conditional access tunnel.

46. (Cancelled)

47. (Previously Presented) A method comprising:

receiving video signals, data services information, out-of-band signals, and application data at Customer Premises Equipment (CPE) on two-way output channels and on a plurality of one-way data tunnels, each different type of out-of-band signal received on a different type of data tunnel;

receiving a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses wherein two different tunnels of the same tunnel type have different tunnel type identifiers.

transmitting the data services information and out-of-band signals to one or more devices with cable modem functionality; and

transmitting the application data and video signals to one or more devices with set-top box functionality.

48. (Previously Presented) The method of claim 47, wherein the communication of the video signals, data services information, out-of-band signals, and application data is defined by the Data Over Cable Service Interface Specification (DOCSIS).

49. (Previously Presented) The method of claim 47, wherein the one or more devices with set-top box functionality outputs the video signals and other media signals to a media output device.

50. (Previously Presented) The method of claim 47, wherein the one or more devices with cable modem functionality processes the out-of-band signals and other non-media signals.

51. (Previously Presented) The method of claim 50, wherein the one or more devices with cable modem functionality further transmits the out-of-band and the other non-media signals to the one or more devices with set-top box functionality via an internal communications link for processing.

52. (Previously Presented) The method of claim 47, further comprising providing conditional access control for the subscriber station.

53. (Previously Presented) An apparatus comprising:

a processor;

a memory having stored therein computer executable instructions, that when executed by the processor, cause the apparatus to perform a method of:

receiving video signals, data services information, out-of-band signals, and application data at Customer Premises Equipment (CPE) on two-way output channels and on a plurality of one-way data tunnels, each different type of out-of-band signal received on a different type of data tunnel;

receiving a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers;

transmitting the data services information and out-of-band signals to one or more devices with modem functionality; and

transmitting the application data and video signals to one or more devices with set-top box functionality.

54. (Previously Presented) The apparatus of claim 53, wherein the communication of the video signals, data services information, out-of-band signals, and application data is defined by the Data Over Cable Service Interface Specification (DOCSIS).

55. (Previously Presented) The apparatus of claim 53, wherein the one or more devices with set-top box functionality outputs the video signals and other media signals to a media output device.

56. (Previously Presented) The apparatus of claim 53, wherein the one or more devices with cable modem functionality processes the out-of-band and other non-media signals.

57. (Previously Presented) The apparatus of claim 56, wherein the one or more devices with cable modem functionality further transmits the out-of-band and the other non-media signals to the one or more devices with set-top box functionality via an internal communications link for processing.

58. (Previously Presented) The apparatus of claim 53, where the method further performs providing conditional access control for the subscriber station.

59-60. (Canceled)

61. (Currently Amended) A gateway ~~cable modem termination system (CMTS), the CMTS~~ comprising:

a processor; and

a memory having stored therein computer executable instructions, that when executed by the processor, cause the gateway to perform a method of:

~~a gateway configured to output~~ transmitting signals on at least two types of data tunnels for transfer over a network to Customer Premises Equipment (CPE), each data tunnel characterized as a one-way data stream of out-of-band (OOB) messaging signals, wherein each type of data tunnel is associated with a different type of OOB messaging signal such that

different types of data tunnels transfer different types of OOB messages and wherein a media access control (MAC) address of each tunnel type is used by the CPE to locate a desired tunnel; and,

~~and wherein the CMTS outputs~~transmitting a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers.

62. (Previously Presented) A method comprising:

receiving data services information from a data network;

receiving out-of-band signals and application data from a management network;

processing the data services information, out-of-band signals, and application data for transmission; and

transmitting the data services information, out-of-band signals, and application data to Customer Premises Equipment (CPE) on two-way output channels and a plurality of different types of one-way output data tunnels, wherein each different type of out-of-band signal is sent on a different type of data tunnel and wherein a media access control (MAC) address of each data tunnel type is used by the CPE to locate a desired data tunnel; and

outputting a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers.